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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,370	11/20/2003	Naveen Chopra	D/99778D	9530

25453 7590 04/17/2006

PATENT DOCUMENTATION CENTER  
XEROX CORPORATION  
100 CLINTON AVE., SOUTH, XEROX SQUARE, 20TH FLOOR  
ROCHESTER, NY 14644

EXAMINER	
TRAN, THAO T	
ART UNIT	PAPER NUMBER
1711	

DATE MAILED: 04/17/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

CW

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/718,370	CHOPRA ET AL.	
	Examiner	Art Unit	
	Thao T. Tran	1711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) Responsive to communication(s) filed on 14 February 2006.
- 2a) This action is FINAL.                    2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1-12 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:
1. Certified copies of the priority documents have been received.
  2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) Notice of References Cited (PTO-892)
- 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) Notice of Informal Patent Application (PTO-152)
- 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Response to Amendment***

1. This is in response to the Amendments filed on 2/14/2006.
2. Claims 1-12 are currently pending in this application. Claim 1 has been amended.
3. In view of the prior Office action of 11/17/2005, the 102(e) rejections of claims 1-12 as being anticipated by Chopra et al. (US Pat. 6,488,870) or Chopra et al. (US Pat. 6,492,025), have been withdrawn due to the Amendments made thereto.
4. New rejections are made as follows.

### ***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
6. Claims 1-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chopra et al. (US Pat. 6,488,870) or Chopra et al. (US Pat. 6,492,025), in view of Nair et al. (US Pat. 5,429,826) or Klaveness et al. (US Pat. 5,536,490).

Chopra '870 teaches a display device or an article of clothing, comprising a plurality of microcapsules adhering to its surface by an adhesive, the microcapsule including a polymerized, optionally hardened shell encapsulating a liquid droplet and a particle component, and a second coating encapsulating the shell (see abstract; Fig. 2; col. 2, ln. 16-20; col. 3, ln. 65 to col. 4, ln.

66; col. 6, ln. 35-45). The particle component is a single particle or from one to five particles, each particle being a bichromal ball having two hemispheric surfaces having different color and electrical characteristics; whereas the shell is insufficient to accommodate another similarly-sized particle that is in addition to the one or five particles (see col. 3, ln. 3-7; col. 5, ln. 33-38; col. 10, ln. 40-42). The particles are hemispheric bichromal balls, wherein one hemisphere is white due to titanium dioxide, and the other hemisphere is black due to magnetite or carbon black (see col. 5, ln. 33-54). The microcapsules have a diameter of about 10 to about 300 mm, and the shell has a thickness of about 0.5 to about 5 mm (see col. 7, ln. 34-39).

Chopra '870 further teaches hardening of the shell being formed by coating the microcapsules with a second coating in an emulsion (see col. 6, ln. 35-45). Thus, the hardened shell would be considered as micelle. Furthermore, since the hardened shell is optional, it's limitation would have no patentable weight. Hardening of the shell can also be induced by introducing a crosslinking agent into the emulsion during gelation for the formation of the shell (see col. 6, ln. 46-59). Thus, the hardened shell is in direct contact with the liquid droplet.

Chopra '025 teaches a display device or an article of clothing, comprising a plurality of microcapsules adhering to its surface by an adhesive, the microcapsule including a polymerized, optionally hardened shell encapsulating a liquid droplet and a particle component, and a second coating encapsulating the shell (see abstract; Figs. 2-4; col. 2, ln. 4-8; col. 3, ln. 53 to col. 4, ln. 65; col. 6, ln. 23-33). The particle component is a single particle or from one to five particles, each particle being a bichromal ball having two hemispheric surfaces having different color and electrical characteristics; whereas the shell is insufficient to accommodate another similarly-sized particle that is in addition to the one or five particles (see col. 2, ln. 59-62; col. 5, ln. 21-26;

claims 1-2, 7-12, 19). The particles are hemispheric bichromal balls, wherein one hemisphere is white due to titanium dioxide, and the other hemisphere is black due to magnetite or carbon black (see col. 5, ln. 21-33). The microcapsules have a diameter of about 10 to about 300 mm, and the shell has a thickness of about 0.5 to about 5 mm (see col. 7, ln. 22-26).

Chopra '025 further teaches hardening of the shell being formed by coating the microcapsules with a second coating in an emulsion (see col. 6, ln. 23-37). Thus the hardened shell would be considered as micelle. Furthermore, since the hardened shell is optional, it's limitation would have no patentable weight. Hardening of the shell can also be induced by introducing a crosslinking agent into the emulsion during gelation for the formation of the shell (see col. 6, ln. 34-47). Thus, the hardened shell is in direct contact with the liquid droplet.

Although both Chopra '870 and Chopra '025 disclose a second coating, neither reference discloses the first or second coating comprising polymerized amphiphilic molecules.

Nair discloses a micelle having an amphiphilic copolymer encapsulating photographic materials such as couplers or dyes (see abstract), so that the hydrophobic, encapsulated materials can be delivered in an aqueous medium and in a controlled manner (see col. 1, ln. 55-61). Therefore, it would have been obvious to one of ordinary skill in the art, to have employed the amphiphilic copolymer, as taught by Nair, in the microcapsule of Chopra '870 or Chopra '025, for the purpose of better delivery of the encapsulated material.

Klaveness discloses a vesicle comprising a polymerized amphiphilic material encapsulating contrast agents (see abstract) to enhance image density of the encapsulated materials and to provide stabilization to the vesicle (see col. 1, ln. 54-64). Therefore, it would have been obvious to one of ordinary skill in the art, to have employed the amphiphilic polymer,

as taught by Klaveness, in the microcapsule of Chopra '870 or Chopra '025, for the purpose of providing an enhanced image density of the encapsulated materials and stabilization to the microcapsule.

***Response to Arguments***

7. Applicant's arguments with respect to the 102(e) rejections of the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thao T. Tran whose telephone number is 571-272-1080. The examiner can normally be reached on Monday-Friday, from 9:00 a.m. - 5:30 p.m.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571-272-1078. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

tt  
April 14, 2006



THAO T. TRAN  
PATENT EXAMINER